

Work Order ID 155589

Tuesday, January 17, 2017 11:28:18 AM

155589

Page 1

Item ID: D044-713-014

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: R44 Bubble Window (RH)

Start Date: 1/10/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 1/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: JAN 19 2017

Tooling:

Date:

Run Start

NR1QC: **DAS 21 9-89** Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

DSI 9329

B

IIN D044-713

B

DAS 6 MAR 01 2017 9-89

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefiles and create labels per PPP D044-713-014 & DSI 9329
CHG003**DAS 28 9-89**

MAY 29 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

1

DAS 6 MAR 01 2017 9-89

MAR 01 2017

DAS 27 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
85		85		Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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Page 2

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Required Date: 1/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D044-713-014 Location : FG099								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.02							
Quality Control									

DAS
21
9-89
MAY 29 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Tuesday, January 17, 2017 11:28:17 AM

155589

D044-713-014

Required Date: 1/17/2017

Required Qty: 1.00

Comments: IPP Rev:A05.03.22New issueKJ/JLM
IPP Rev:A06-07-03As per DSI 9329 JLM
IPP Rev:C 08-07-30 chg qty DD verified by:EC

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DART

DESIGN QP	DRAWN BY LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED QP	APPROVED H	DRAWING NO. DSI 9329	REV. B SHEET 1 OF 1
DATE 06.06.26	TITLE BUBBLE WINDOW INSTALL MOD.		SCALE NTS
A	06.04.25	NEW ISSUE	
B	06.06.26	CHG TO EFFECTIVE AFTER CHG 002	

DART SERVICE INSTRUCTION
TO AMEND INSTALLATION INSTRUCTIONS IIN-D044-713 REV. A
REF. CANADIAN STC: SH05-13 ISSUE 1
REF. FAA STC: SR02088NY

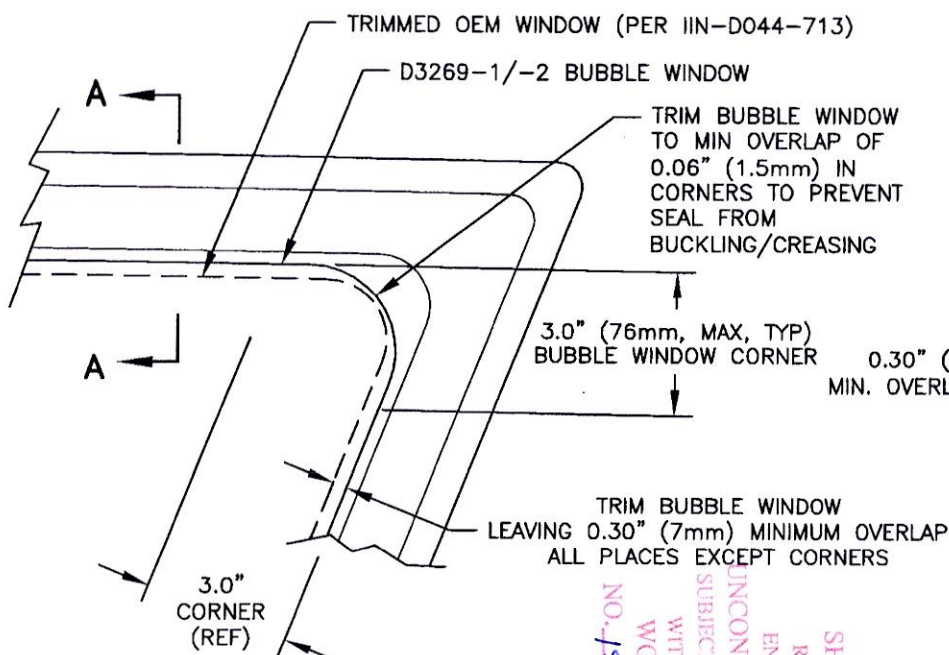
PURPOSE: For the D044-713-013/-014 kits supplied after CHG 002, the D3267-1/-2 bubble windows have been supplied untrimmed to allow for easier installation in the field. The installer must trim the windows in accordance with these instructions prior to installation.

PROCEDURE:

- 1) Modify the R44 crew door per items 3.2.1 and 3.2.2 of Installation Instructions IIN-D044-713 Rev.A.
- 2) Fit and trim the D3269-1/-2 Bubble Window to match the cutout in the door as follows: The bubble window must be a minimum of 0.30" (7mm) larger than the cutout in the OEM window as shown in the figure below. However, in the corners of the window, it is acceptable to trim a 0.06" minimum overlap (1.5mm) to help prevent the D2126-0903 Seal from buckling/creasing in the corners. The edge of the bubble window must be deburred to a smooth finish.
- 3) Continue installing the bubble window per items 3.2.3 through 3.2.5 of the installation instructions.

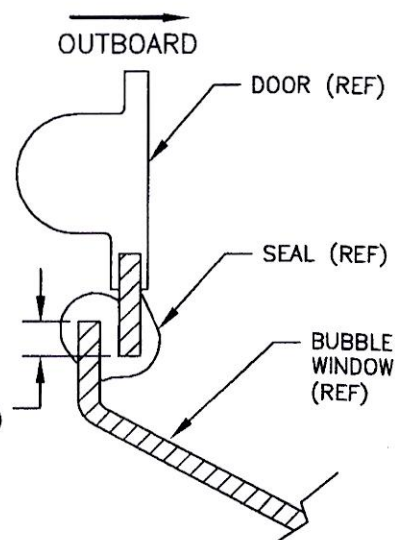
FIGURE 1

LOOKING AT INSIDE CORNER OF DOOR



SECTION A-A

(NOT TO SCALE)



CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: D. SHEPHERD (DE # 02)

DATE: 06.06.26
CERT. NO.: SH05-13
ISSUE NO.: 1

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Work Order ID 155589***155589***

Page 1

Wednesday, March 01, 2017 12:43:03 PM

Item ID: D044-713-014

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: R44 Bubble Window (RH)

Start Date: 1/10/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 1/17/2017 Req'd Qty: 1.00

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Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

DSI 9329

B

IIN D044-713

B

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefiles and create labels per PPP D044-713-014 & DSI 9329
CHG003DAS MAR 01 2017
21
9-89

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

4.0 WEIGHT AND BALANCE

The following are the net weight increase associated with the modification kits.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D044-713-011 Crew Door Window Kit	1.5 lb 0.68 kg	±24 in ±0.61 m	±36 in-lb ±0.43 m-kg	66 in 1.68 m	99 in-lb 1.1 m-kg
D044-713-013 Bubble Window Kit, LH	2.5 lb 1.1 kg	-28 in -0.71 m	-70 in-lb -0.78 m-kg	66 in 1.68 m	165 in-lb 1.8 m-kg
D044-713-014 Bubble Window Kit, RH	2.5 lb 1.1 kg	+28 in +0.71 m	+70 in-lb +0.78 m-kg	66 in 1.68 m	165 in-lb 1.8 m-kg
D044-713-015 Passenger Door Window Kit	1.2 lb 0.54 kg	±23 in ±0.58 m	±28 in-lb ±0.31 m-kg	83 in 2.11 m	100 in-lb 1.1 m-kg

5.0 PARTS LIST

Qty -011	Qty -013	Qty -014	Qty -015	Part Number	Description
X				D044-713-011	CREW DOOR WINDOW KIT, (FITS LH & RH)
	X			D044-713-013	BUBBLE WINDOW KIT, LH
		X		D044-713-014	BUBBLE WINDOW KIT, RH
			X	D044-713-015	PASSENGER DOOR WINDOW KIT, (FITS LH & RH)
			1	D2126-0720	SEAL
1	1	1		D2126-0903	SEAL
	1			D3269-1	BUBBLE WINDOW, LH
		1		D3269-2	BUBBLE WINDOW, RH
1				D3277-1	WINDOW
			1	D3279-1	WINDOW
	1	1		D3312-1	PLACARD
			1	D2977	BRACKET
			1	MS21042-08	NUT
*1	*1	*1		DT8720	D044-713-011/-013/-014 CUTTING TEMPLATE (FWD DOOR)
			*1	DT8721	D044-713-015 CUTTING TEMPLATE (AFT DOOR)

* Not to be installed. Cutting template only.